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A N
Inaugural Dissertation

ON
P N E U M O N I A,
OR
P U L M O N A R Y S T A T E O F F E V E R.

Submitted to the Examination of
The Rev. John Ewing, S. T. P. Provost,

THE
TRUSTEES AND MEDICAL FACULTY
OF THE
UNIVERSITY of PENNSYLVANIA.

On the 17th May 1796.

For the Degree of Doctor of Medicine.

BY EDWARD JONES, OF SOUTH-CAROLINA,

Member of the Philadelphia Medical Society

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TO

Matthew Irvine, Physician,

THIS Dissertation is inscribed as a tribute of
Respect, from his much obliged and
very affectionate Pupil,
EDWARD JONES,

TO THE

Rev. Thomas Frost, D. D.

IS gratefully inscribed, the First Fruits of an
Education acquired by his Friendship
and Patronage, from his sincere
and much indebted Friend,
EDWARD JONES.

P R E F A C E.

A MUCH admired author observes, “that every one ought to hasten and present to Society the tribute of those talents which Heaven has bestowed on him ;” A consideration on which I plead my apology for thus early entering into the literary world, and which I hope will secure me from the imputation of presumption.—Conscious of my insufficiency for the attempt, and sensible of the many inconveniences to which inexperience is exposed, I feel a diffidence surmountable only by actual necessity, and though conformity to the rules of this University, (which demand from each candidate for medical honors, a testimony of those abilities cultivated and improved by its Professors,) brings an excuse for each adventurer, yet when we know our inability for the due execution of such a task, unpleasant apprehensions will prevail. Fully aware therefore of the many inaccuracies contained in these sheets,—I solicit indulgence from the public, and hope that every reader on perusal of them, will remember the disadvantages of youth, inexperience, and an early publication.

AN INAUGURAL
D I S S E R T A T I O N.

IT has long been a practice among some physicians to distinguish Pneumonia into different species according as the complaint is seated in the lungs or membrane investing them; but, as all names and divisions of diseases which have not an advantageous tendency, should be rejected from books of medicine, I would propose considering all inflammatory affections of this organ or its appendages, under the general head of Pneumonia, a liberty which may the more readily be granted, as it can produce no ill consequences, the symptoms and method of cure being in each similar.—My inducement for this plan, however, is not confined to this circumstance alone, but receives additional support from an observation related by Dr. Sydenham*, wherein he asserts, that Peripneumony and Pleurisy differ only in de-

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* *Vid. Pract. vol. I, page 369.*

grec, and in respect of the great violence and larger extent of the same cause.—I have also the authority of Doctor Kuhn for this opinion. He mentions in his lectures, that they are seldom distinct when violent; and lastly, Dr. Wistar confirms the truth by the incontrovertible test afforded by dissection. Were it requisite I could adduce many other testimonies to prove the fact, but the respectability of the physicians quoted above, renders it superfluous and quite unnecessary. Having then sufficiently established the unity of these two species as distinguished by some authors, I must now beg leave to introduce another, viz. Catarrh—which the generality of writers have considered a distinct complaint; but, which by frequently changing into Pleurisy, and vice versa, gives a seeming probability of their being the same disease.—Sir John Pringle* in speaking of this state of the inflammation says, “that a recent cough from cold may be considered as the lowest degree of Peripneumony—and Dr. Rush in his clinical lectures draws the same conclusion. If to this we add similar curative treatment, proportioned to the exigency of the cases we need no further confirmation, and I think may consider the proposition as estab-

* *Dis. of Army*, page 159.

lished upon almost certain principles—Upon these facts I prove the unity of these affections, and from their appearing to give such ample grounds for considering them under one general head, I shall proceed so to do as mentioned in the commencement of this dissertation.

PNEUMONIA, like every other state of fever, begins with chilliness, succeeded by heat, thirst, restlessness and the usual symptoms of fever, accompanied with pain in the thorax, difficult breathing, and most commonly a cough.—This definition includes all the states of this disease which are four in number, viz. 1st, Pneumonia Vera. 2nd, Pneum. Notha. 3rd, Pneum. Typhoides. 4th, Pneum. Catarrhalis. The distinguishing symptoms peculiar to each of which I shall now notice, and then consider the 1st, or Pneumonia Vera more particularly.—This state is attended with Pyrexia, acute pain in the breast, difficult breathing, more especially on inspiration—a cough dry in the beginning, but afterwards humid and bloody, and a tense, quick pulse.—The 2nd. state is distinguished by Pyrexia, obtuse pain in the breast or side, very difficult respiration, moist and frequently bloody cough—the patient can seldom lie down with ease, and has a pulse sometimes soft and almost imperceptible, but

generally rises upon bleeding.—The 3rd. state is in some instances accompanied with miliary eruptions, vomiting of bile, great pain, cough, rather more humid than in the Vera, the pulse small and a little hard, but soon becoming soft.—The 4th. state or Pneumonia Catarrhalis may arise from either contagion or cold, in the former case producing the well-known disorder called Influenza, which sometimes exists in so violent a degree, as to constitute a true Pneum. Vera. The symptoms from whichever cause are nearly similar, except that in the former, they are more violent and in a more considerable degree—It is known by a foreness and oppression in the breast, difficult breathing, and feverish pulse; The affection sometimes extending to the head and neck, occasioning stupor, redness of the eyes, swelling of the throat and other appearances, the consequence of morbid determination to these parts.—Having given the marks by which we may distinguish the various states of this disease, I will now proceed to the history and more minute examination of Pneumonia Vera, selected because of its frequency and because its symptoms comprise indications of cure for all the others.

HISTORY.—This disorder may exist in any country or season of the year under parti-

cular circumstances. But those in which it is most prevalent, are such as frequently vary in temperature, when the vicissitudes of weather often alternate, and when the body is exposed to the operation of sudden changes from cold to heat.—Every writer on uniform climates, gives proof to this truth by informing us, that weather uniformly hot or uniformly cold, is unfavourable to inflammatory complaints: The time of its most common appearance, viz. the Spring, is however in itself sufficient to evince the influence which variableness in the weather, has in predisposing to and producing this disorder, and further assists us in a knowledge of the predisposing and exciting causes, but of these more hereafter.—It chiefly attacks people in the night, or during sleep, and those of a sanguine temperament are particularly disposed to it. It almost always comes on with a cold stage, accompanied with the other signs of Pyrexia, as accelerated respiration, great thirst, head-ach, internal heat, and sometimes bilious vomiting and purging, proofs undeniably pointing out the primary disease, a fever, and as clearly shewing the following features, symptoms only—Flying pains in different parts of the thorax, soon succeed the forerunners just noticed, sometimes darting towards the clavicle, at others downwards, and in some

cases from the sternum to the spine, frequently changing their place through the progress of the complaint, and according to Dr. Cleg-horn*, affecting the right side so particularly, that out of sixty patients who were seized at the same time with this disease, forty-two had them in the side just mentioned—nor is the brain always free from invasion in this complaint. The sick are much disturbed in their sleep by frightful dreams, they awake in great anxiety, *sometimes* rave, and in many instances labour under phrensy—the pulse is tense, quick and frequent, except in the advanced stage of the disorder, the tongue is moist and white—the skin rather dry—the urine high coloured, costiveness the attendant of every inflammatory fever, is not absent here, and the cough which grievously harrasses the patient if not soon relieved by a free expectoration or other means, keeps up the fever and lays the foundation for succeeding Abscesses, Empyema, and Hydrothorax. Blood drawn from a vein has different appearances depending on the violence of the fever, and lastly, the disease often changes its situation and goes off in the form of Erysipelas, Phlegmon, bleeding from the nose and anus—copious menstruation from

* *Vid. Dif. Minorca, page 263.*

females, and abscesses in various parts of the body, each of which may be considered a favorable circumstance, as it relieves an organ essentially necessary to life, and places the complaint in a situation less dangerous and destructive.

DIAGNOSIS.—As the Pathognomonic symptoms of every disease, serve as chief guide to the physician, both in the distinction and method of cure, it becomes essentially necessary in the history of a complaint, to give those marks which particularly serve to characterize it from all others, for which it may be mistaken; and since in disorders of the lungs several oftentimes arise which may mislead the judgment or occasion erroneous practice, I consider it incumbent on me to point them out in order to prevent the young practitioner from risking his reputation by an injudicious decision, or endangering the life of his patient by the use of improper remedies.

The complaints which from that sympathy which connects our frame, or from the contiguity of situation, and occurrence of some symptoms may be mistaken for Pneumonia inflammation or Asthma, Carditis, Gastritis, Hepatitis, Splenitis, and inflammation of the intercostal muscles.

The presence of Pyrexia and its concomitants, distinguish it from the first of these disorders or Asthma, for though a few feverish symptoms may exist in some instances, yet they are not the essence of this disease, which consists in a spasmodic affection of the muscular fibres of the bronchiæ, not necessarily connected with fever.

It may be distinguished from Carditis by the pain in this disorder being chiefly under the sternum, inclining rather to the left side—by an irregular intermitting pulse, palpitations of the heart, great anxiety and syncope.

It may be distinguished from Gastritis by the latter being attended with acute pain in the epigastric region, especially, by a small tense pulse, by frequent vomiting, on any thing being swallowed ; and lastly, by violent fits of hiccup.

It may be known from Hepatitis, by a sense of weight, tension and pain in the right Hypochondrium, which always accompanies this complaint—by a swelling and enlargement of this region—by the pain extending to the

clavicle and top of the right shoulder—by hiccup, dry cough, and an inability of the patient to lie on the side opposite to that affected.

It may be discovered from Splenitis by pain occupying the left Hypochondrium—by pressure on the part being very painful—and lastly, by an absence of many of the symptoms particularly characterizing Pneumonia.

It may be distinguished from inflammation of the intercostal muscles, which Dr. Cullen places under the head of Rheumatism, by redness of the parts, and exquisite soreness on pressure—by the cough being always dry and by the most distressing pain on every inspiration.

OF THE REMOTE AND PREDISPOSING CAUSES—The remote causes are all such as produce debility in the system generally, and Pneumonic organs in particular, and which Debility, when once induced affords predisposition.—This I infer, 1st. From the seasons in which it is most frequent.—2nd. From a fact related to me by Dr. John Otto, wherein he observed, that a person having laboured under Hemiplegia, had the debilitat-

ed side especially affected by an attack of Pneumonia.—3rd. By those who have laboured under the complaint, being more liable to it than other people, and 4th. By its coming on at night when the body is most weakened. These are reasons which in my opinion furnish sufficient authority for asserting & explaining debility as the only true predisposing cause of Pneumonia, and are such as not only account for its frequent appearance in the Spring season, when the susceptibility of the system to the action of stimuli is morbidly accumulated by the cold of the preceding Winter, but also support the position by the most undeniable conclusions. It is an axiom in medicine, that acute debility is attended with an increased excitability, or disposition in the system to receive impression—and as cold is by every one acknowledged to produce sedative effects, or direct debility, we may readily anticipate the influence of its operation, and account for its being a very fruitful and the most frequent remote cause of this disorder—I say most frequent, because it is in immediate contact with the lungs, and thereby particularly disposes them as well as the system in general to the influence of any stimulus applied.—When combined with moisture its effects seem more certain, and its influence in producing a

determination to the lungs is apparent from the following extract taken from Sir John Pringle,* who speaking of the troops when in one of their encampments says, “ the Ground though naturally good was not thoroughly dry, and though the days were warm, the nights were still cold, and condensed the vapours.—These *interchanges* of *heat* and *cold* joined to the moisture inseparable from tents, could not but affect the health of men unused to the field ; accordingly many were seized with inflammatory disorders of sundry forms.—When the number was 220, the distempers were classed and stood thus—Pleurisies and Peripneumonies 71.—Rheumatic pains with more or less fever, 51.—Inflammatory fever without Rheumatic or Pleuritic pains, 25.—Intermittents 30.—Hard coughs without fever, 9.—Old coughs and consumptions, 7.” This passage shews nearly half the complaints Pulmonic, and proves the liability of these organs to be thrown into disorder when any of the remote causes producing inflammatory fever have been applied to them—It also gives additional confirmation to the opinion of debility inducing predisposition, since nothing can more effectually occasion it, than cold and moisture.—We have hitherto been speaking

* *Vid. diseases of army, page 17—18.*

of *direct* debility only, or that arising from the abstraction of natural healthy stimuli; but as all stimulus acting in excess may also produce that species which is called *indirect*, the symptoms in each being similar, we may readily conceive that the circumstances occasioning this last, may likewise act as remote causes in producing this disorder—they are principally great fatigue, intemperance, too much labour, violent exertions of the lungs, or any exercise that occasions debility in the whole system generally, and Pneumonic organs in particular, which by increasing their excitability disposes them more especially to the influence of any stimulus applied.

EXCITING CAUSES.—The axiom already noticed, (page 10) greatly assists us in accounting for, and explaining the frequency of Pneumonic inflammation in the spring months, or on the body being exposed to sudden heat immediately succeeding the operation of cold, for as the system in this case has been weakened, and has its excitability increased so any disproportioned stimulus applied proves the cause of morbid action.—Viewing the body then in a state in which the smallest impression takes effect we can readily imagine the influence the warm sun in the spring must have in

occasioning inflammatory fevers with local determination, according to the seat of predisposing debility. For what in the lungs produces Pneumonia would in the joints and muscles occasion rheumatism, or in the vessels of the head, an apoplexy. It is the local predisposition that invites *irregular* excitement; and as Dr. Rush emphatically expresses in his Lectures, attracts disorder wherever it exists, just as the electric rod does lightning. Nor is it difficult to explain, why debility in a part should render that part more particularly liable to disorder in a general inflammatory Affection; for when the arterial system is violently excited, and the *vis a tergo* great, those situations most weakened and unable to bear the impetus, must be most exposed to inflammation and effusion—On this principle I would account for all partial complaints, not arising from external injury: it seemingly offers a reasonable explanation, adducing to its further proof both causes and symptoms. Any stimulus applied disproportioned to the excitability of the system, may therefore be considered as the occasional cause of this disease, whether heat from the meridian sun, a stove-room, or warm beds; intemperance in eating or drinking, hot suppers, suppressed evacuations, or ob-

structed perspiration—the which last is a discharge so necessarily connected with health, that being retained in the body, it flies to the seat of least resistance, accumulates there, and by morbidly distending the pulmonary vessels, is a frequent exciting cause of pneumonic inflammation. So liable is the body to be thrown into disorder, when labouring under debility, that the weakest stimuli are sometimes capable of producing morbid action ; So very acute is the excitability, that the most moderate degree of heat is sufficient to throw the whole arterial system into that state of convulsion which constitutes the essence of fever—a Circumstance well deserving the physician's attention, as it teaches him to regulate his remedies to the state of the system, and divests his practice from the influence of stated rules, or the bias of prejudice.—Thus have I delivered a history of the remote, predisposing and exciting causes of pneumonia, without the last of which, no inflammatory disease can possibly exist—I have already remarked their being unknown in uniform climates, and the reason is given by the absence of intervening stimuli—nor would people ever be frozen to death without marks of inflammation, was an exciting cause applied—It is this which pro-

duces the disproportionate effect called disorder, and occasions the proximate cause of this complaint.

PROXIMATE CAUSE.—As the cure of every disorder to which the human frame is liable greatly depends on a knowledge of its proximate cause, it is not wonderful that a disease so violent and distressing in its symptoms as Pneumonia, should have occasioned various opinions on this subject: Numerous as they have been few of them however are able to bear the proof of strict examination; and while some of them need not an argument to prove their insufficiency, others though seemingly valid in theory are soon refuted by the test of fact and reason. Time would not admit, nor does necessity require that I should consider them separately, and shall therefore speak but of one of the most received among practitioners, viz. “Spasm affecting the Capillaries of the Pulmonary vessels.” An Effect in my mind taken for a Cause, since when held in the former light we can easily account for all the symptoms produced, while in the latter we can only bring to our aid the weak support of fanciful hypothesis. The proximate cause which to me appears most natural and plain is, “an ex-

cess of *irregular* action in the arterial system.” For the opinion I am indebted to the professor of the Institutes of Medicine in the University of Pennsylvania, I have adopted it because it better explains the Phenomena of this complaint than any other I have met with, and because it is not the offspring of supposition, but a principle.—That a Spasm does exist in the lungs in this complaint is not be doubted, but to view this Spasm as a cause is highly irrational.—I say irrational, because contrary to the laws of nature and rules of philosophy—which last teaches that it is the property of every elastic tube to lessen its diameter when a distending power is removed, and since in consequence of debility and *irregular* action, this evidently takes place in the pulmonary vessels, why should we not rather impute Spasm as an effect, and support it by fact, than seek to explain it as a cause by theoretical and inconclusive argument?—Other evidences might be brought in favour of this Position were they needful, but the one before us appears in itself so forcible and sufficient, that further addition could only serve to lengthen these sheets without affording stronger confirmation.

CURE.—The history of Pneumonia as already related evidently points it out an inflammatory disorder indicating for its cure, a strict pursuance of the Antiphlogistic regimen in all its various forms. The season of its greatest prevalence, the violent Pyrexia most generally present, and other circumstances the effect of morbid excitement in the arterial system all co-operate in leading to this plan as solely suited to relieve its violence and rescue the patient from the most oppressing malady. —Such are the symptoms also that physicians have almost universally agreed upon similar curative treatment, and as the fever is or ought to be our chief guide, so they have as generally been successful when the remedies applied have been proportioned to the indications of the pulse and state of the system—It is these afford the compass by which we should be governed in our practice, and which when strictly adhered to will always render our prescriptions safe, our endeavours successful.—Thus viewed, no limits or stated rules can be laid down in treating of the cure ; I can only generally recommend those means found most useful under particular circumstances, and leave their application in practice to the prudence and judgment of the practitioner. Our

object then being to reduce excessive morbid action and obviate its effects—the most certain remedies for accomplishing it are 1st. *blood-letting*—2nd. *cold*—3rd. *blistering*—4th. *purging*—5th. *sweating*—and 6th. *abstinence from stimulating aliment*.—We will therefore treat, first of BLOOD-LETTING. Much has been said by authors with regard to the time and quantity in which blood ought to be drawn but as every restriction of this nature can only tend to mislead the practitioner or occasion an improper limitation of the most necessary remedy, I shall in preference recommend it whenever inflammatory action in the pulse requires it, whenever there is very difficult and painful respiration, or whenever the appearance of extravasated blood gives sufficient grounds for continuation of its use; which last circumstance, though variable by particular occurrences nevertheless generally affords a very excellent indication. The states of the blood as leading to a pursuance of the lancet are, 1st. when it is dissolved—2nd. when it has the appearance of molasses—3rd. when part of the crassamentum is dissolved in the serum—4th. when the crassamentum sinks in the bowl—5th. crassamentum floating in the serum, and particles of blood of a florid red colour being at the bot-

tom and sides of the vessel—and 6th. fizy or buffy coated blood.—These are guides that I believe will seldom deceive us: most of them are sanctioned by facts drawn from observations made in my preceptor's* practice—others from some instances that have come under my own care during this season, and all of them from the indubitable authority of some practitioners in this city. Any period of the disorder with attention to the foregoing remarks admits of this remedy, whether applied in the earlier or later stages of it, and so long as any of them remain violent the prudent practitioner will always have recourse to ven. sect. as the most safe and certain remedy; I say always, because when the complaint exists with considerable force, this means becomes absolutely necessary to procure the beneficial effects which other methods offer, more especially expectoration, and hence says Dr. Cullen†, “during the first days of the disease, I have not found that bleeding stops expectoration, on the contrary, I have often observed bleeding promote it; and it is in a more advanced stage of the disease only, when the patient by large evacuation, and the continuance of the disease

* *Dr. Mat. Irvine.*

† *Vid. Pract. vol. 1. page 389.*

has been almost exhausted, that bleeding seems to stop expectoration"—an occurrence which as it appears to arise from debility in the vessels produced by disproportionate depletion may be effectually guarded against by attention to the pulse. Bleeding however, is not only advantageous by diminishing the volume of fluid and thereby relieving the stimulus of distension, but also by lessening the *specific* stimulus of life; *specific* because experiments prove that an animal cannot exist with any other fluid in its sanguiferous vessels, although of a similar temperature with the blood itself—In proof whereof, Dr. Wistar related in his lectures that a calf was bled until nearly all its blood was evacuated and syncope induced, and that in this state the blood of another calf being transfused into its veins it soon recovered. Into the jugular veins of the second calf a large quantity of milk was introduced of the same temperature as the blood of the animal; But, how different the result! The heart which had ceased to pulsate, instantly gave three or four convulsive palpitations, and then ceased to beat forever. Dr. Hales* statical experiments are also in point—they likewise in-

* *Vid vol. II. Statical Essays, page 115.*

form us that distension is not in itself the only stimulus afforded by the blood towards the support of animal life—and observe that on water being infused into the Blood-vessels of dogs they instantly died: These are inferences that at once point out the grand resource of ven. sect. on this principle and prove a twofold advantage in its application.—With respect to the quantity of blood to be taken during the complaint, I shall be as general in my observations as I have hitherto been, making the state of the pulse, violence of the symptoms, and age of the patient my monitors, not confining myself to any fix'd limitation but proceeding to a cure by those plans which proportion my remedy to the degree of disorder and state of the system. So far as concerns the quantity to be drawn at one bleeding some caution however is necessary; for a too sudden abstraction of stimuli is as injurious as their too great application, and in the 1st or 2nd operation of ven. sect. to prevent it claims considerable care. There is notwithstanding an exception to this rule in the second state of Pneumonic inflammation or Pneumonia Notha, a disease which being occasioned by excess and continued through deficiency of action in the vessels of lungs calls loud for copious bleeding, in or-

der to free these organs from the oppression of accumulating blood, and by preventing further influx enable them so far to maintain their tone, as to withstand the impetus of the *vis a tergo*, and thereby give a chance for favourable termination. Every period of life admits the use of this valuable remedy ; In infancy as well as in extreme old age, it has been successfully employed and has the additional strong recommendation of being the preventative against a tedious cough, Empyema, Hydrothorax and Phthisis Pulmonalis.

OF THE SECOND MEANS OF CURE OR COLD.—The sedative effects of cold when applied to any body of a warmer temperature than itself renders it apparently useful in this complaint when judiciously administered.—Its influence in removing a portion of accumulated heat, and thereby obviating the most fruitful cause of morbid excitement is so evident, that its use must be attended with very great advantages, and if applied for sufficient length of time, it must on the principles of its operation certainly moderate the fever, and relieve its symptoms.—Dr. Sydenham* indeed

* *Syd. Pract. vol. 1. page 375.*

deemed it absolutely requisite to keep his patients cool in this disease, and in order to it, allowed them to sit up a few hours every day as strength admitted, and even considered it of great moment, as often necessary to render the evacuation of blood and other cooling remedies successful in their operation.”—Debilitating in its nature, it must be serviceable in all inflammatory disorders, where danger is proportioned to the degree of excitement and excess of stimulus—Dr. Blane says, that a hurricane at Barbadoes cured the acute Pleurisy, and mentions that a delicate lady of his acquaintance, who was ill with it at that time, became perfectly well after passing more than ten Hours in the open air, and sitting generally several inches deep in water, a Fact that while it evinces the favourable consequence of its application here, also promises on the basis of principle and reason happy effects as the result of its judicious administration in this disorder. —Should it be urged, that fear might have aided the recovery in the case just related, I would answer that for a little time it probably might have done so ; but that ten hours was long enough to inspire some hope, which by neutralizing (if I may use the expression) the sedative passion, left the influence of cold pre-

dominant. To dwell longer on this subject is unnecessary.—Truth is a unit and best supports its own argument. I shall therefore proceed to the third indication of cure or

BLISTERING.—From what has been said on the subject of Blood-letting, we may plainly discover it to be our principal remedy in this disease, but, the advantages of blisters are so manifest, and their efficacy so great, that they are deservedly employed by most practitioners.—Sir John Pringle † speaks of them in the highest terms, and says that a pleurisy taken in the beginning may often be cured by one large bleeding and a blister laid to the side affected.—The time of their application must be regulated by the state of the fever, which if violent should always be moderated before we use them, taking care to avoid the simultaneous influence of the lancet and vesicatory, as the nature of their operation occasions interference if both are applied when the effect of either is incompleated. With this caution they are servicable at any period of the complaint if the pain is distressing and the respiration difficult. They afford relief by remov-

† *Vid. Dis. army, page 145.*

ing internal inflammation to the surface of our body, and there creating an artificial disease less destructive in its nature than that for which they were made a remedy. In the latter stage of Pneumonia when the patient is so debilitated as to endanger much further depletion, and at the same time small morbid action remains in the pulse, Epispastics appear no less serviceable than when earlier used, and if applied to the pained part seem to attract by their moderate evacuation the last efforts of disease, and freeing the patient from his most oppressive malady, prove at once the dominion and power of medicine.

OF PURGES.—If we for a moment consider the bad tendency of costiveness in a state of health, we are immediately so well convinced of its ill effects in disease, that to obviate it we think a necessary means of cure, and having already noticed its existence in this as well as other inflammatory affections, I need not mention its deserving particular attention. I am aware that by some, purging may be objected to, in consequence of a spontaneous Diarrhœa that so frequently prevails in Pneumonia without being useful: to such, however, I would reply, that the physician does not

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leave its production to the chance of a disproportioned cause, but on the other hand, avails himself of those medicines which possessing stimulus in a small degree only, yet fully answer the purpose for which they were intended, and by their mild operation prevent or remove a very fruitful exciting cause of fever. Of the number are cooling laxatives, and emollient glysters ; They are proper and very serviceable in carrying off and guarding against the accumulation of Fæces in the bowels, and should be distinguished from strong purgatives which would injure by their stimulus, and occasioning a too copious evacuation, or diarrhœa might finally hasten the patient's destruction. Too much regard therefore, cannot be paid to their varied power, and we should ever remember when we administer Cathartics, "that laxatives may be infinitely beneficial, while purgatives, strictly so called, may prove as detrimental."

OF SWEATING.—The principle on which blisters are applied, and the determination of the fluids to the skin, in many instances of Pneumonic inflammation speak considerable advantage from the use of sudorific medicines, and in my opinion particularly authorise

their exhibition in the advanced stage of this disease, when morbid action is so much subdued as to prevent injury by their stimulant operation. Most authors allow them serviceable in topical affections, and their operation in deriving to the surface and relieving internal Congestion renders them particularly beneficial in disorders of the lungs, I have often witnessed their good effects in cases that came within my observation, and indeed have sometimes known them relieve the breast by diffusing excitement when almost every other means seemed ineffectual. Their influence on this principle is not however their only virtue, as they further assist in promoting a free and copious expectoration which most generally is a discharge necessary to relieve oppression of the chest and difficult respiration.—In our use of them they require nearly the same caution as was noticed respecting Cathartics, viz. not to give them incautiously, but to select those, whose influence may be serviceable without danger, and whose mild operation alone renders their administration safe and advantageous.—Of this class are all Emetics given in nauseating doses, which if assisted in their operation by methods generally employed, will seldom fail procuring a moderate Diaphoresis well suited to relieve in this disorder.

ABSTINENCE FROM STIMULATING ALIMENT.—In a complaint where morbid action is already in excess little need be said on the subject of stimuli ; the principle of their operation, and their well known effect in increasing the circulation of the blood, immediately shews the necessity of their disuse, and infinitely prejudicial influence in every state of fever.—It is our business therefore to avoid them under such circumstances and thereby recommend to our patients abstinence from every thing possessing such a quality.—Should they incline for food which is seldom the case if the disorder is violent, that sort only should be given which affords little or no stimulus. For their drinks and to allay the thirst attending this disease, we should advise such as are mild and diluent, them to be drank moderately warm, and in order to render them more agreeable they may be slightly acidulated.—Thus, apple-water, tamarind-water and such like are very effectual in obviating thirst and may be used in this intention with perfect safety.

Inflammation of the lungs may terminate by resolution, suppuration and Gangrene ; but when the cause of death, it is most frequently as dissections prove by effusion, which com-

pressing the vessels and stopping circulation occasions a suffocation. This last seems peculiar to this complaint and is the manner according to Dr. Cullen*, in which perhaps Pneumonic inflammation most commonly proves fatal. Should our endeavours to procure resolution be ineffectual, suppuration and a discharge of purulent matter will be the consequence ; and though some authors reject bleeding under this circumstance be the symptoms what they may, yet if the pulse is not reduced and inflammatory symptoms supervene, bleeding should as certainly be prescribed, as though no such evacuation existed. I would readily admit the caution was the pulse sufficiently weakened and soft to secure a solution of the disease by this discharge ; but if otherwise, trusting to its efficacy alone is risking the patient's life, and I may say perhaps giving source for the most unhappy consequences. A commencing suppuration may be known by frequent and partial chills, while its formation may be judged of by a considerable remission of the pain, with a continuance of the Dypnœa. When we are desirous of procuring or supporting an expectoration, no means can be more effectual than proper doses of squills, Volat. Alkali and the

* Vid. Pract. vol. I. page 272,

nauseating emetics before treated of, and which, if judiciously administered will almost always afford the desired beneficial effects, and lend much aid in conquering the disorder. The termination of Pneumonia in Gangrene is so rare an occurrence, and so universally fatal when it does occur, that to acquaint the young practitioner with the means of distinguishing it is a stronger inducement for my touching on it here than any other motive could possibly dictate, particularly as the science of medicine can claim no dominion over it, and therefore affording no expedient, can indulge no hope. The marks which indicate its presence, are a sudden cessation of pain, a languid quick pulse, dim eye, fetid breath, and a great universal debility; symptoms that each plainly point out approaching dissolution, and such as allow the physician no other credit than a just Prognosis, while they create him much anxiety from his inability to withhold the threatenings of impending death.

To suppress coughing which in this complaint frequently arises from the irritation of acrid mucus, we should prescribe mucilaginous and oily demulcents as not only serving to defend the contiguous parts from its influ-

ence, but likewise to keep it mild by preventing its stagnation. In the more advanced stage of the disorder when inflammatory action is subdued we may have recourse to a few drops of laudanum, a remedy which though injurious when morbid action is great is nevertheless infinitely serviceable when this action is removed, and the cough by keeping up irritation, and pain is the most urgent symptom.—Much care however is requisite in its exhibition, for by carrying our dose too far we increase the inconvenience we wish to remove, and considerably aggravate all the symptoms.—It is the indication of the pulse and condition of the System that should govern us in this as well as every other prescription; and which by leading us to adopt Principle for the Application of our Remedies, will generally ensure success in their administration, while it averts the danger and frequently fatal effects of a Random Practice.

On concluding my Dissertation, I feel so much indebted to all the Professors who fill chairs in this University, that was I to close these sheets without acknowledging the obligation, I should consider myself unworthy the benefits I have reaped from their instructions; permit me

therefore to express my thanks through this opportunity, and be pleased to accept in wishes the only means I have for making a return.— May the public capacity in which you are engaged ever reward you with the Honors you deserve ; May all your just principles make impression never to be erased from the memory of your pupils ; May you enjoy in this life the blessing you so much delight in giving to others ; and may Peace and everlasting Happiness be your lot in that which is to come.

ERRATA.

In page 7th, fourth Line from bottom,—
for *Pneumonia*, read *Pneumonic*.—Same
page, third line from bottom, for *or*, read
are.

Med. Hist.

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